remarks by including this Kite as one of the useful species in destroying these vermin. He also confirms what I state about the vast numbers of rats in Western Queensland, and records an instance when an indigenous species covered the North-Western Plain country of Oueensland in 1869 and 1870 (a few hundred miles due north of where I camped on the Diamantina in 1918) in vast numbers impossible to estimate, and states:—"It would be impossible to estimate numbers; for hundreds of miles along the Flinders River and its tributaries traces of these rats were to be seen. Fifty thousand square miles of country occupied by these vermin, and one rat to every ten square yards in each mile, would not represent anything like their numbers. large plains seemed to be their favourite resort. When camping out, every article had to be hung in a tree, and the hobbles, made of greenhide, have been known to be gnawed off the horses' feet during the night." Dr. Cleland also mentions (on page 126 in his address) that in the year 1887 there was an enormous migration of rats-thousands of millions-near Lake Eyre, in South Australia, the information being communicated to the Doctor by Mr. John M. Bagot, who was witness to it all.—S. W. J.

[In view of the importance of Letter-winged Kites as vermindestroyers, with the kind permission of Mr. J. A. Kershaw, F.E.S., Mr. J. E. Chubb, R.A.O.U. (of the National Museum), has, with his usual skill, mounted and posed a pair of these useful birds (see coloured plate). The plate will enhance the value of Mr. White's and Mr. Jackson's articles, and at the same time be much appreciated by members of the R.A.O.U. Mr. White has been good enough to defray the expenses of the coloured block, as well as of the excellent half-tone blocks accompanying Mr. Jackson's article.—Eds.]

Notes on Birds from the Gouldian-Gilbert Typelocality, North Australia.

(Based on Material in the "H. L. White Collection," National Museum, Melbourne.)

By A. J. Campbell, C.M.B.O.U.

INTRODUCTORY.

It is a matter of history how many of Gould's types of Australian birds, including those collected by Gilbert at Port Essington, Arnhem Land, went to Washington. What was Australia's loss was America's gain, and we do not altogether regret what friends obtain.

Mr. H. L. White conceived the far-reaching idea of sending Mr. William M'Lennan to explore the northern coast, with instructions to establish a collecting camp at some suitable place on Arnhem

After touching at the Goyder, Glyde, and Liverpool Rivers, M'Lennan remained for a while and camped inland on the King River (see map facing p. 118, Emu, vol. xvi.), which locality is, as the Crow flies, about 80 miles from Port Essington, where Gilbert procured Gould's northern types. The King River is, therefore, practically the Gilbertian type-locality. Judging by the reports of explorers and others, the same class of country is common to Arnhem Land, Kimberley on the west, and Carpentaria on the cast. Our exploring member, Mr. Gerald F. Hill, who, besides being a good field ornithologist, has made a study of botany, and understands the flora and physical features of a country, has informed me that he can find little or no difference in the character of country, say, around Napier Broome Bay (North-West Australia) and that of Port Darwin district and the Macarthur River (Northern Territory). In fact, Mr. Hill says the embouchures of the Fitzroy River, in the North-West, and the Macarthur River, in the Gulf country, bear a striking resemblance to each other. The country generally on the coast has its interminable mazes of mangroves, succeeded in turn by "paper-bark" (Melaleuca) swamps, forest flats — eucalypts, Eugenia, Pandanus, &c.—then gullies running up into rough and broken sandstone plateaus. When Mr. Hill read Mr. M'Lennan's account of the King River country, he could have believed Mr. M'Lennan was describing parts of Kimberley district; therefore, if the environment of the avifauna of the whole country, though extensive, be similar, we should be careful how we subdivide species which, in point of fact, may be identical.

However, for some reason or other which is not apparent, there are slight differences in a few kinds. For instance, some species of birds from Napier Broome Bay (North-West) and the Macarthur River, or Gulf country, are identical, while the same species on the intermediate northern part of Arnhem Land, only three or four degrees (about the width of the little State of Victoria in its broadest part) further north, are a slight shade darker, notably the White-tailed Robin (Pacilodryas pulverulentus), Brown Shrike-Thrush (Colluricincla brunnea), Chestnut-breasted Finch (Munia castaneothorax), Masked Grass-Finch (Poephila personata), &c. "One Swallow does not make a summer." These few exceptions do not constitute a separate avifaunal sub-locality, with subspecific differences in species, but can be simply mentioned, if necessary, as "observations." No scientific ends are gained by applying to these trifling, perhaps variable, differences useless classical triple names.

Although a bad season, and enduring many hardships, M'Lennan succeeded in collecting between 50 and 60 Gouldian-Gilbert species, practically all the Port Essington ones save, perhaps, the Little Kingfisher (Alcyone pusilla), the Great-billed Heron (Ardea sumalrana), the Rose-crowned Fruit-Pigeon (Plilonopus ewingi)—both the latter seen but not collected—and a few of the Limicoline birds. The Rose-crowned Fruit-Pigeon is also found in

North-West Australia (see Hill, Emu, x., p. 263).

Now that geographical races are so keenly discussed and described, it is important to have a given starting-point, or keynote, as it were, for North Australian birds. Therefore, specimens from an original centre like the Port Essington region are indispensable for examination and comparison. Although 80 years have elapsed since Gilbert's day, there has been probably no variation, save seasonal, &c., in the respective species in the north. At least, Gould's fine plates, that have been compared with M'Lennan's skins, do not indicate any change, so far as coloration is concerned.

John Gilbert worked from "Victoria," as the military settlement at Port Essington was called. The settlement was formed in 1838 and abandoned in 1849,* Gilbert appears to have reached

the settlement during 1841.

Gilbert accompanied Gould to Australia as a taxidermist, and was sent to Western Australia in 1839. When Gould returned to England, 1840, Gilbert followed with his (Gilbert's) western trophies, and in 1841 (or 1842) returned to Australia, touching at the West again on his way to Port Essington, Northern Territory. There is no available record how long Gilbert remained at Port Essington. Gould seems to have described Gilbert's discoveries there mostly in the "Proceedings of the Zoological Society" (London), 1842, notably at the October meeting, when he "exhibited and characterized" thirty new species of birds. In 1844 Gilbert joined Leichhardt's exploration expedition from Brisbane to Port Essington, and, unfortunately, met his death at the hands of treacherous natives, 29th June the next year.† A photocreproduction of the marble tablet erected to the memory of Gilbert in St. James's Church, Sydney, is in *The Emu*, vol. xi., plate xv.

The following personal sketch by the late Mrs. Robt. Brockman, of Guildford (W.A.), which shows Gilbert's enthusiasm as a collector, was communicated to the writer, and is not without

interest :-

"He was in the York district collecting birds, also their eggs, for Mr. Gould's large work, 'The Birds of Australia,' and in the course of his travels one day came to 'Woodside,' and, as a matter of course, was asked to stay and rest. We liked him so well that we told him to consider our house his headquarters whenever his occupation brought him within reach of us; and he was a great deal with us while after the birds he was in quest of.

"He used to go out after breakfast, provided with some luncheon, and we seldom saw him until late in the afternoon, when he would come in with several birds and set busily to work to skin and fill them out before dark. In the evenings he used to sing for us, and it was a great treat to hear his lovely voice, for

^{*}A paragraph concerning the settlement will be found in Professor Ernest Scott's "Short History of Australia," p. 245. Further reference may be found in the British "Parliamentary Papers" for 1843, vol. xxxiii.

[†] An account of the circumstances of Gilbert's tragic end is recorded in "Nests and Eggs" (Campbell), vol. i., pp. 330, 331.

such a beautiful tenor voice was rarely heard in those days. He

had a good selection of songs.

"He was an enthusiast at his business, never spared himself, and often came in quite tired out from a long day's tramp after some particular bird, but as pleased as a child if he succeeded in shooting it.

"We became very friendly, and were much grieved to hear of his sad death. Strange to say, he always had a dread of blacks, even in our quiet place. He told me he was a widower, and spoke in very loving terms of a little daughter he had left in England.

"I wish I could recollect more about him. I shall only add once more that we all liked him much, and thought highly of him. I remember his face now, perfectly, as he used to look when he came in and threw off his heavy pack. He would say, 'Now for a cup of your nice tea, and I shall be all right.' I think he was, altogether, nearly two months in our neighbourhood, then he travelled on towards Toodyay."

It would be nothing short of a national calamity were Australians to allow Gouldian-Gilbert names that are scientifically correct to be displaced on their bird-lists by some obscure, or obsolete, or long-forgotten name, which certain nomenclators desire

to have.

An interesting and graphic account of M'Lennan's adventurous and trying trip is recorded by Mr. H. L. White under the title of "North Australian Birds" in *The Emu*, vol. xvi., commencing at page 117. A second article, by M'Lennan, commencing at page 205, contains copious field notes, data, &c., which are

extremely useful for reference.

Gilbert did not leave many ornithological "stones" unturned, because M'Lennan discovered but one new species—the Whitestripe Honey-eater (Ptilotis albilineata, White)—plate xlv. Nor did M'Lennan miss much that Gilbert saw, save the few species before stated. In the month of January (1916) M'Lennan flushed some of the Swinhoe Snipe (Gallinago megala), and shot a specimen. Gilbert also collected the species, which Gould, strange to say, though somewhat sceptically, mistook for the common Australian Snipe. Had Gould's scepticism carried him farther, he might have anticipated Capt. Swinhoe's discovery by twenty years! Gould writes ("Handbook," ii., p. 271):—"On comparing the Snipes killed at Port Essington with others obtained in Tasmania, some trivial differences are found to exist, and which it is necessary to point out, in order that future observers may be induced to ascertain if they be identical or if they constitute two distinct species; on a minute examination, the Port Essington bird is found to have a shorter tail, and the four lateral feathers narrower, than in that of Tasmania, besides which the tail of the former is composed of eighteen feathers in both sexes, while the specimens of the latter contained in my collection numbered sixteen. It is true they were killed during a partial moult, which circumstance renders it doubtful whether sixteen be the right number or not."

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Gilbert mentions that the Port Essington bird was only an occasional visitor, arriving about the middle of November, when the rainy season commenced, and disappearing again in a week or two. During its short stay it frequented swampy but open grassy situations. He never saw more than six or eight at a time,

and always found them very wild.

Long years afterwards it was left to the untiring energy of Mr. Gregory Mathews to establish the existence of a second species of Snipe in Australia, first mentioning it in *The Austral Avian Record*, i., p. 125 (1912), then figuring the bird in his greater work, "The Birds of Australia," iii., pl. 167. While praising Mr. Mathews's good work, it is only fair to students to say his "1913 List" is very puzzling on some points. I found it convenient to take the Gouldian–Gilbert type-localities from it, but in checking Gould's original references I found that eight or ten type-localities were not Gilbertian, but were "North-West Coast of Australia" and not "Port Essington, Northern Territory," as indicated on Mr. Mathews's "List." The instances are cited as they occur in the pages following.

LIST OF SPECIES AND REMARKS.

[Nomenclature according to R.A.O.U. "Check-list," together with that of Mathews's "List of the Birds of Australia" (1913).]

Megapodius tumulus, Gould. Scrub-Fowl.

Megapodius duperryii tumulus.*

One 3. Heavier than the Eastern Queensland variety (assimilis, Masters), especially bill and legs, besides being darker in colour and having the loose feathers of the head not so reddish-brown. Wing, 280 mm.; eastern bird, 250 mm.

Gilbert furnishes a long and interesting account of the Scrub-Fowl's habits as witnessed at Port Essington district (Gould's

"Handbook," ii., pp. 168–174).

Synoicus (australis) cervinus, Gould. Northern Brown Quail.

Ypsilophorus ypsilophorus cervinus.

One 3, 1 \(\varphi\). Smaller and redder (sandy), especially the 3, than typical australis from New South Wales, but similar to North-West Australian birds (see Mathews's "Birds of Australia," i., pl. 11). Gould does not figure this race. A specimen procured by H. G. Barnard and myself on Kirrama table-land, Rockingham Bay district, is not "more reddish on the under surface," on which supposition Mathews has designated it queenslandicus.

Turnix castanota, Gould. Chestnut-backed Quail. Austroturnix c. castanota.

One 5, 2 99. Lighter red than North-West Australian specimens, which differ, as Mathews has pointed out (*Nov. Zool.*, xviii., p. 181), and named *magnifica*. Moreover, King River birds possess

^{*}Mathews has since amended the genus and the dominant species—vide Austral Avian Record, vol. ii., p. 112, and vol. iii., p. 20, respectively.

darker markings on the back, while in the North-West examples the white markings on the head are of a more spotted nature.

As the North-West coast is Gould's type-locality for *castanota* (see *P.Z.S.*, 1839, p. 145), how does Mathews propose dealing with his sub-species *magnifica* from the same faunal region?

Wing measurements in mm.:—♂, 87; ♀♀, 87 and 90; North-

West 9, 102.

Geopelia placida, Gould. Ground-Dove.

One Q. Smaller than southern birds—tranquilla, from New South Wales. Western examples (Coongan River) are browner, as depicted by Mathews ("Birds of Australia," i., pl. 32, back figure), and subsequently named clelandi.

Chalcophaps (chrysochlora) longirostris, Gould. Long-billed Green-

Pigeon.

Two 33. Under surface of southern birds—typical chrysochlora—is browner, while the northern race is more chocolate or purple-brown, besides the difference in length of bills. Again, viewing the green backs at right angles, longirostris has the more bronzed appearance. The northern bird has not been figured.

Geophaps smithii, Jardine and Selby. Naked-eyed Partridge-Pigeon.

Terraphaps smithii.

Eulabeornis castaneoventris, Gould. Chestnut-bellied Rail.

Two 33, r 9. Fine and typical specimens. Gould at first received eggs of this species, but, on account of its shy nature and mangrove retreat, it was some time before he obtained material to identify and describe the parents.

Lobivanellus personatus, Gould. Masked Plover.

Lobibyx miles personatus.

One Q. Wing, 222 mm. Common at Port Essington in Gilbert's time.

Hæmatopus ophthalmicus, Castelnau and Ramsay. Bare-eyed Oyster-catcher.

Hæmatopus niger ophthalmicus.

One \circ . This northern bird is apparently a good sub-species, and possesses a longer bill, by an inch, than H. fuliginosus (niger).

Notophoyx (aruensis) flavirostris, Sharpe. Pied Egret.

Tonophoyx arnensis flavirostris.

Two 33, 3 \$\$, 2 \$\$ juvenile, 1 \$\$ juvenile. Although observed by M'Lennan at the Glyde River, northern coast of Arnhem, he collected these skins at the Roper "rookery," Gulf of Carpentaria.

The mature birds were in perfect plumage—blackish-slate and white. The young are variously marked on the head-one is dark, another whitish, and another brownish. According to M'Lennan,* some full-fledged young are pure white on the head, as shown in Sharpe's plate of N. aruensis ("Cat. Birds Brit. Mus.," xxvi., 1B), which is apparently an immature bird of the above species. Mathews recognizes another "Gulf" sub-species—normani, "smaller and darker" (A. A. R., ii., p. 126). Does he infer that every rookery has a different sub-species? Birds from South Alligator River are similar to the Roper ones, as is also an immature specimen collected on the Archer, on the opposite shore of the Gulf, similar to the Roper immatures. If one is partly making sub-species on colour variation, one needs to be very accurate, and, without being hypercritical, it may be pointed out that while Mathews's plate ("Birds of Australia," iii., No. 190) shows the true colour—blackish-slate—his text states slaty-black: two different colours, or hues, according to chromatology.

Gould's splendid coloured plate (No. 62, "Birds of Australia," vi.) depicts a pair of these little Pied Egrets beautifully posed.

Garzetta immaculata, Gould. Lesser Egret.

Egretta garzetta immaculata.

Two 65. Average dimensions in mm.:—Length 606, wing 268, culmen 88, tarsus 106. Legs black; bill black, with yellow base.

From the Roper rookery, and apparently typical.

Mathews, because of its "smaller size," differentiates the North Queensland bird as *kempi*. Many of Mr. Mathews's distinctions are exceedingly subtile, and sorely puzzle students. Do some of his sub-specific names merely indicate certain localities? If so, it might be more instructive, for instance, to state them thus:—"G. immaculata (North-West), G. immaculata (Territory), G. immaculata (North Queensland)," as the case may be. Lesser Egrets from all these localities are apparently alike.

Butorides stagnatilis, Gould. Little Mangrove-Bittern.

Butorides striata stagnatilis.

One 3, I not sexed, I immature. Mathews has adopted the dominant specific name, *striata*, of the South American bird, because of its general resemblance in structure and coloration to the Australian one. This may be understood; but we cannot follow him in a further subdivision of this Australian form. There is apparently no difference in type-locality specimens and a skin from Cape York which Mathews calls *littleri*.

Tadorna rufitergum, Hartert. White-headed Shieldrake.

Radjah radjah rufitergum.

Two 33. As Gould gives, in his "Handbook" (ii., p. 360), the white residents' and the aborigines' names of Port Essington, for this fine species, he no doubt took his figure ("Birds of Australia," vii., pl. 8) from examples collected by Gilbert, and adopted the

specific name *radjah*. Hartert long afterwards pointed out (*Nov. Zool.*, xii., p. 205) that the Australian bird was sub-specifically distinct.

Ninox rufa, Gould. Rufous Owl.

Rhabdoglaux rufa.

One \mathfrak{P} , 2 \mathfrak{F} juvenile. As expected, this Rufous Owl is lighter-coloured and slightly larger than the same species frequenting the heavily-timbered tracts of North Queensland. Mathews separates the latter under the name queenslandica, and gives good figures of both varieties in his "Birds of Australia," iii., pls. 265, 266. One of the juvenile specimens from the Territory is very light-coloured, with long white down hanging from the back of the neck and from the tibia. Gilbert obtained but one specimen, which became the type.

Calyptorhynchus macrorhynchus, Gould. Great-billed Cockatoo.

Calyptorhynchus banksii macrorhynchus.

One 3. Wing, 460 mm. All Gould's examples were collected at Port Essington. Whether this fine species be a sub-species or not of banksi, it is similar in appearance to North-Western birds (Napier Broome Bay district). Mathews gives the average wing measurements of North-West and Territory birds as 430 mm., and figures a pair (vol. vi., pl. 282).

A 3 specimen from North Queensland (? northi, Mathews) has

a wing 440 mm.

Ptistes (erythropterus) coccineopterus, Gould. Crimson-winged Parrot.

Aprosmictus e. coccineopterus.

Three 33 (one not in full plumage and one immature). As Gould pointed out, this northern race is smaller, but has a larger bill, and the red patch on the wings wears a crimson hue (scarlet-red), and is not so extensive as in *erythropterus*. The northern bird has not been figured.

Podargus phalænoides, Gould. Freckled Frogmouth.

Podargus strigoides phalænoides.

Two 33, 19. Average wing, 220 mm. The 9 is inclined to be redder than the 33, and is also redder on the throat, which appears to be characteristic of the 9. Mathews's *mungi*, for the North-West, is not a convincing sub-species; moreover, Gould's type-bird came from "North-West Coast of Australia" (vide P.Z.S., 1839, p. 142).

There is in the National Collection, Melbourne, a 2 almost

entirely rufous, taken at Alligator River (N.T.), 11/1/13.

Ægotheles novæ-hollandiæ, Latham. Owlet Nightjar.

Ægotheles cristata leucogaster.

One \circ . Similar to other Northern and North-Western skins in the "H. L. White Collection," and is not so dark on the under surface (abdomen) as southern birds from New South Wales or

Victoria. Should Gould's leucogaster be reinstated (as a sub-

species), the Territory being its type-locality?

I have examined three rufous examples of the Owlet Nightjar from North-West Australia (Hall's rufa), the types of which (5 and 9) are in the National Museum.

Alcyone (azurea) pulchra, Gould. Purple Kingfisher.

Two 35. Apparently no difference between type-locality birds and those from North-West (Napier Broome Bay), which latter Mathews distinguishes as alisteri. However, it is possible to separate the Tasmanian race (diemenensis, Gould) from the true mainland azurea, by the former's darker—almost black—crown and blue-black, instead of blue, on the sides of the chest.

Dacelo cervina, Gould. Fawn-breasted Kingfisher. Dacelo leachii cervina.

Two 33. Wing, 190 mm. Darker above, but same size as North-West specimens (occidentalis, Gould). The mid-Western Australian birds (Broome and Shaw River) are also lighter-coloured and have a larger wing—210 mm. Mathews suggests the name cliftoni for this race. It would be interesting to learn if Mathews's kempi for North Queensland is fawn-breasted, or is light-breasted, like the typical leachii. The fawn-breasted is found at Cape York, while the typical leachii is known to extend to Rockingham Bay district.

Cacomantis (variolosus) dumetorum, Gould. Northern Square-tailed Cuckoo.

Cacomantis pyrrophanus dumetorum.

One of. Smaller and lighter-coloured than specimens taken in New South Wales or Victoria. Wing, 130 mm.

Chalcococeyx minutillus, Gould. Little Bronze-Cuckoo. Neochalcites m. minutillus.

Three 53, I \(\phi\). Nice series. Gould had only one Gilbertian specimen of this bird from Port Essington. Males have the upper surface light bronzy-green, with crown of head the more greenish. The females have a trace of brown upon the breast, while immature birds are apparently not barred, but have a uniform greyish under surface. The russata, Gould, would appear to be a more north-east Queensland bird, is more uniformly coloured, with a decidedly darker bronze-green on the upper surface, and with a greater amount of brown on the breast and tail (see also note on Cardwell specimens, The Emu, xvii., p. 18).

Since his "1913 List" Mathews has recast, in his opinion, the sub-species of *minutillus*, which includes *russata* (see *Emu*, xvi., p. 34). It would appear that his first arrangement of making each a separate species was nearer correctness. Mr. H. L. White informs me that the eggs in his collection of *minutillus* are "uniform olive-brown, similar to *C. plagosus* type," while those of *russata* "are not to be distinguished from those of *C.*

basalis—i.e., white ground, spotted all over with reddish-brown." By their fruits ye shall know them" is an eternal truism.

The whole family of the beautiful little Bronze-Cuckoos is an interestingly complex problem. The difficulty is to get the eggs of all species properly identified.

Centropus (phasianus) macrourus, Gould. Northern Coucal.

Polophilus phasianinus macrourus.

One 3. In brownish (immature) plumage. Length 616, wing 240, culmen 36, tarsus 55 mm. Compared with those from North-West (melanurus, Gould) there is no difference in this specimen.

Pitta iris, Gould. Rainbow Pitta.

Pulchripitta i. iris.

One of This species was one of Gilbert's original beauties. This male, compared with one from Parry Harbour, North-West Australia, has more of an olive wash in the golden-green coloration of the upper surface, and is larger, notably in bill and legs. Wing, 110 mm. as against 100 mm. for North-West bird. Mr. G. F. Hill, who has observed this species both in the North-West and in the Territory, states it nests in the open forest in the first locality and in the scrub along water-courses in the other.

Micrœca flavigaster, Gould. Yellow-breasted Flycatcher.

Kempia flavigaster.

One J. This specimen is not so bright as Borroloola (Macarthur River) birds, which, however, do not differ essentially from those of North Queensland (terra-regina, Mathews). It would be akin to "straining at the gnat and swallowing the camel" to separate these on sub-specific lines; all have whitish throats when in full plumage. Gould's fine plate (No. 94, "Birds of Australia," vol. ii.) represents a typical bird.

Smicrornis flavescens, Gould. Yellow-tinted Tree-Tit.

Smicrornis brevirostris flavescens.

Two do, I \(\text{.} \) "The least of the Australian birds," as Gould states, and identical with Macarthur River (N.T). specimens, and the same as those from Napier Broome Bay (North-West Australia), which latter Mathews has separated as rogersi. Those obtained on the Kirrama table-land, Cardwell (Emu, xvii., p. 20) are similar to Territory type-specimens, but, if anything, are a trifle smaller. Gould's plate (No. 104, "Birds of Australia," vol. ii.) is a perfect representation of the species.

Murchison and Coongan River (North-West Australia proper) examples are similar to each other, and appear to come between flavescens and brevirostris. As shown in the R.A.O.U. "Checklist," possibly flavescens and brevirostris are separate species.

Gerygone magnirostris, Gould. Large-billed Fly-eater. Ethelornis m. magnirostris.

Two 33, 1 2. Gilbert shot his historic pair on Greenhill Island,

near Port Essington. There is no difference in these typelocality birds and Mathews's cairnsensis of North Queensland. The latter are certainly not "much paler grey coloration above and paler below." However, that description is applicable to his North-Western race—whitlocki (A. A. R., iii., p. 24).

Gerygone lævigaster, Gould. Buff-breasted Fly-eater.

Wilsonavis l. lævigaster.

One 3, 3 9. Although the foregoing species is also "buff-breasted"—indeed, more so than this—lævigaster from the Roper River can be easily separated by its white brow and white under the eye. It is identical with North-West Australian (Napier Broome Bay) examples—broomei (Mathews).

It may be here suggested that if North's pallida be not a separate species, it may be a sub-species of lævigaster, instead of

fusca (see also remarks, Emu, xvii., p. 20).

Gerygone chloronota, Gould. Green-backed Fly-eater.

Wilsonavis c. chloronota.

One 3. This Gilbertian species is difficult to observe in the mangrove trees, which it loves. This example does not appear to differ from a 3 from North-West Australia, which Mathews has differentiated as *darwinii*. Wings of both examples, 54 mm.

Pachycephala falcata, Gould. Northern Whistler.

Lewinornis rufiventris falcatus.

Two \$5, 1 \(\rightarrow\$ immature. Average dimensions in mm.:—Length 159, wing 86, culmen 15, tarsus 20. Smaller and paler (pale cinnamon) on the breast than the southern race. But colour may be regulated by season—drought, &c.—because a pair (5 and \(\rightarrow\$) taken on the Macarthur River (N.T.) two years previously to the King River specimens is singularly rich-coloured—more so than any southern rufiventris in the "H. L. White Collection."

Pachycephala simplex, Gould. Brown Whistler.

Muscitrea s. simplex.

Two 33, 1 9. This plain species has a uniform olive-brown upper surface, slightly mottled (striated) throat, light buffy chest, and whitish abdomen. Gilbert states it is shy and retiring. Length 147-148, wing 75, culmen 15-16, tarsus 20 mm.

Rhipidura dryas, Gould. Wood-Fantail.

Howeavis rufifrons dryas.

One 3. A fine skin. Less rufous on the back, which colour just touches the base of and does not extend along the tail, as in the southern *rufifrons*. It is similar to North-Western birds—

parryi (Mathews).

There is little difference between skins collected in North Queensland (Cardwell) and Victoria. Probably the true *rufifrons* migrates between these two climes, yet Mathews calls the Victorian migrant *inexpectata*.

Rhipidura isura, Gould. Northern Fantail.

Setosura setosa isura.

One 3, 2 99. Slightly lighter-coloured than North-Western and Macarthur River (N.T.) skins. Wing, 83 mm. Since the article by H. G. Barnard and myself on the "Birds of Rockingham Bay" (Emu, xvii., p. 23), an examination of a larger series indicates that the birds in that district are a darker race; wing also larger—90 mm.

It should be stated that Gould's type locality for R. isura is "North-West Coast" (P. Z. S., 1840, p. 174), not "Port Essington,"

as shown on Mathews's "List," p. 186.

Rhipidura (motacilloides) picata, Gould. Lesser Black-and-White Fantail.

Leucocirca tricolor bicata.

One of. Wing, 90 mm. Smaller and not so black above as the familiar southern form.

Myiagra concinna, Gould. Blue Flycatcher.

Myiagra rubecula concinna.

One o, wing 73 mm.; I o, wing 70 mm. Mathews shows Port Essington as the type-locality of this species. Gould, in his works, states that concinna "is a native of the North-Western portion of Australia." See also original description, P. Z. S., 1847, p. 221. King River (N.T.) specimens are not so brilliantly plumaged as North-Western birds, and are smaller than the southern race plumbea (rubecula).

Piezorhynchus nitidus, Gould. Shining Flycatcher.

Piezorhynchus alecto nitidus.

Two &&, I ♀. These examples were collected on the Liverpool and Glyde Rivers, and may be clubbed with tormenti (Mathews), from North-West Australia, which is Gould's type-locality. (See P. Z. S., 1840, p. 171.) Wing of both, 90 mm., and females have chestnut-brown backs, whereas in alecto, from Cape York, and wardelli, from Cardwell, the backs of the respective females are lighter (cinnamon-rufous). In alecto the male has a bluishblack sheen, as against greenish-black of all the other males. The wing of alecto is 95 mm., and it has a much bigger bill, and may be a separate species.

In Gould's "Handbook," i., p. 250, there is quoted Gilbert's interesting original field notes concerning the Shining Flycatcher

at Port Essington and its nest.

Graucalus hypoleucus, Gould. White-bellied Cuckoo-Shrike. One of, 1 9. Wing, 149 mm. Same as Macarthur River birds, which do not differ from North-West specimens (parryi, Mathews). North Queensland specimens have more grey on the breast, for which Mathews has suggested the name stalkeri. Wing, 153 mm.

Cisticola (exilis) lineocapilla, Gould. Grass-Warbler.

One 3, 1 \(\varphi\). Strongly striped specimens, the male without the

usual rufous head. This little species is puzzling in its distribution. Between the strongly-marked extreme northern and southern races there appears to be a pale form, extending from the lower Gulf of Carpentaria country to North-West Australia, agreeing with either one of Mathews's three sub-species—alexandra, normani, and parryi.

Malurus cruentatus, Gould. Red-backed Wren-Warbler.

Ryania melanocephala cruentata.

One 3, wing 42 mm.; 3 53, immature, wing 40 mm. The colour of the mature male's back is a beautiful red, between spectrum and carmine. Gould's plate (No. 27, "Birds of Australia") is cleverly coloured to tone. North Queensland skins show a more scarlet colour (pyrrhonota, Mathews), while South Queensland and Northern New South Wales are still lighter—a distinct grenadine red (melanocephalus, Gould). There is little difference in the plain colour of the respective females. Mathews states that Port Essington is the type-locality of cruentatus. Gould's own evidence is "North-West Coast of Australia," and his reference (P. Z. S., 1839, p. 143) is two years earlier than when Gilbert reached Port Essington. However, there is no appreciable difference between birds from the two localities, and in that case Ramsay's boweri would become a synonym, especially if the North-West be the actual type-locality.

Colluricincia brunnea, Gould. Brown Shrike-Thrush.

Two 33, I \circ , showing reddish brow. Colour, a tone of woodbrown or drab above. North-Western birds (parryi, Mathews) which are like those from the Macarthur River (Gulf country) are paler and are not so dark about the throat and chest, but have the same wing (130 mm.)

Colluricincia parvula, Gould. Least Shrike-Thrush.

Conigravea p. parvula.

Two 33 (wing 100 mm.), $1 \$ \$. Uniform olive-brown above, and the smallest of its kind.

Neositta leucoptera, Gould. White-winged Tree-runner.

Neositta pileata leucoptera.

One 3, 1 \(\frac{1}{2}, \) I not sexed. Port Essington birds are darker in general coloration than those from North-West Australia, Gould's type-locality (P. Z. S., 1839, p. 144), and which latter birds Mathews has named napieri (broomei) (A. A. R., i., p. 95); but females are usually darker in this species than the males. In the specimen "not sexed" the black on the head extends below the sides of the face to the chin. Macarthur River and Brunette Downs examples are typical. Wing, 77-81 mm.

The R.A.O.U. "Check-list" probably correctly separates, speci-

The R.A.O.U. "Check-list" probably correctly separates, specifically, this white-winged bird from the black-capped, brown-

winged N. pileata.

Zosterops lutea, Gould. Yellow White-eye.

One 3, 1 Q. A perfect pair, and similar to hecla, and probably also to tribulationis—both Mathews's sub-species for North-West Australia. Wings alike (55 mm.)

Pardalotus uropygialis, Gould. Chestnut-rumped Pardalote.

Pardalotus melanocephalus uropygialis.

One δ , τ φ , τ immature. There appears to be some uncertainty whether the Gouldian type-locality of this interesting species is Arnhem Land or North-West Australia. Gould, in his letterpress, states the latter locality, while his fine plate * undoubtedly depicts birds from Port Essington. In the Territory specimens the lower back and upper tail coverts are not "chestnut" but are more golden (cadmium yellow), while the North-West birds have those parts light cadmium, and the flanks and under tail coverts are paler buff.

Melithreptus albogularis, Gould. White-throated Honey-eater.

Melithreptus lunulatus albogularis.

One 3, 2 \$\partial \text{\text{\$\geq}}\ . A plentiful species in Gilbert's time. Birds from North-West Australia (sub-albogularis, Mathews) and Macarthur River (Gulf country) both appear to be similar to type-locality specimens, there being little or no difference in size or in coloration.

Field observation points to *lumulatus* and *albogularis* being separate species. They are found in the same faunal locality, and are not migrants. For further remarks on this subject by G. H. Barnard and myself, see "Birds of Rockingham Bay," *Emu*, xvii., p. 31.

Myzomela erythrocephala, Gould. Red-headed Honey-eater.

Three 33, I Q. Fine skins. Gilbert found this beautiful little creature rare at Port Essington. Head deep spectrum red, or between that colour and carmine, like the back of *Malurus cruentatus*. Can find no difference in North-West examples (derbyi, Mathews). Moreover, North-West Australia is the actual type-locality (see Gould, P. Z. S., 1839, p. 144); yet Gould, in his "Handbook," i., p. 556, states that all specimens that came under his notice were procured at Port Essington.

Myzomela obscura, Gould. Dusky Honey-eater.

Melomyza o. obscura.

Three 63. Average length 146, wing 71, culmen 19, tarsus 19 mm. Nearly uniform drab or hair-brown colour, above and below. The North-East coastal (Cairns and Cardwell) birds are darker (clove-brown) above and browner (chestnut) underneath—harterti, Mathews. In this decision I have modified the view which I held with Mr. Barnard when our "Birds of Rockingham Bay" (Emu, xvii., p. 32) were published.

^{*&}quot; Birds of Australia," folio, ii., pl. 41.

Glyciphila fasciata, Gould. White-breasted Honey-eater.

Ryanornis f. fasciatus.

Conopophila albogularis, Gould. Rufous-breasted Honey-eater.

Four 33. Have darker flanks than their near ally, rufogularis, and have a white throat and brown (buffy) breast mark.

Ptilotis unicolor, Gould. White-gaped Honey-eater.

Stomiopera u. unicolor.

One 3, wing 98 mm.; 3 \$\pi\$, wing 87-90 mm. This unique bird, Gould records, "is one of the many species that rewarded Gilbert's researches at Port Essington." It is well named specifically, being of a uniform olive-brown appearance. It is not appreciably different from Gulf (Carpentaria) birds, or those from the North-West, which latter, however, may be a trifle (tint) lighter. One specimen in the "H. L. White Collection," from Cairns, has a greenish hue—perhaps a seasonal or age-stage of plumage. If not, Mathews's sub-species (yarra) is a good race.

Entomyza albipennis, Gould. White-quilled Honey-eater.

Entomyzon cyanotis albipennis.

One 3, wing 150 mm.; 2 \$\varphi\$. According to Gilbert, this is a "day-dawn bird"—one of the first heard at early morn. The white-winged *Entomyza* appears to be confined to the northern centre and North-West Australia, with no discernible sub-specific difference, while the bigger brown-winged birds range eastern Australia from north to south.

Philemon (citreogularis) sordidus, Gould. Little Friar-Bird.

Microphilemon orientalis sordidus.

Two 33, I Q. Another of the drab-coloured birds of the north. Smaller, buffy-brown, and not so greyish as the common species, citreogularis. Its near neighbour (occidentalis, Ramsay) in the North-West may be a trifle lighter. Some specimens exhibit a few yellow feathers on the breast, possibly due to immaturity. This Gilbertian bird has not been figured.

Tropidorhynchus argenticeps, Gould. Silvery-crowned Friar-Bird.

Philemon a. argenticeps.

Two 33, wing 135-138 mm.; 1 \(\phi\), wing 139 mm. Same drab-coloured back as in *Philemon sordidus*, and does not appreciably differ from Macarthur River (Territory) and North-West birds, the latter locality evidently being the true type-locality (see *P. Z. S.*, 1839, p. 144). Gould procured his original specimens from Ben. Bynoe, surgeon, H.M.S. *Beagle*, whom Gould met at Sydney.* That being so, Mr. Mathews can hardly sustain his sub, *broomei* for North-West Australia.

Poephila gouldiæ, Gould. Gouldian Grass-Finch.

Four 33 (2 red-headed phase), I \(\mathbb{Q}\), 2 33 (immature), I \(\mathbb{Q}\) (immature). A useful series, and of most historic interest, besides

the bird being an aviary favourite.

"It is with feelings of the purest affection," Gould modestly writes, "that I ventured in the folio edition to dedicate this lovely bird to the memory of my late wife, who for many years laboriously assisted me with her pencil, accompanied me to Australia, and

cheerfully interested herself in all my pursuits."

Gilbert discovered the species on Greenhill Island, near Port Essington, where, he states, "it inhabited the edges of the man-groves and thickets. When disturbed it invariably flew to the topmost branches of the loftiest gums—a habit I have not before observed in any other member of the genus. Its note is a very mournful sound added to a double 'Twit.' Those I observed were feeding among the high grass, in small families of from four to

seven in number, and were very shy."

Although the Territory is the type-locality of the species, it extends on either hand to North-West Australia and North Queensland. In the latter locality Mathews gives sub-specific rank to Ramsay's phase, armitiana, and adds one of his own. kempi, because of its "richer under surface" (A. A. R., ii., p. 132). In the long and valuable series of skins of the Gouldian Finch in the "H. L. White Collection," nothing is richer-coloured than the mature males from the type-locality—Parrot or oil-green backs, dark mauve or dull bluish-violet breasts, and yellow (light cadmium) under parts. The greenish upper surface of some of the North-Western (Derby) birds, however, is slightly more yellowish.

Poephila personata, Gould. Masked Grass-Finch.

Neopoephila p. personata.

Three 33, I Q. Wings, 58 mm. Slightly darker or richercoloured than those from other localities. However, some from Port Darwin (near the type-locality) are a little lighter-coloured, and agree with Napier Broome Bay (North-West) specimens— Mathews's harterti.

Neochmia phaeton, Homb. and Jacq. Crimson Finch.

Three 33, 2 99. A nice series, and well-named "crimson" in tone of colour. Not a Gouldian-Gilbert type, but, as Gould states, Hombron and Jacquinot's bird was collected at Raffles Bay, "a locality closely bordering that in which Gilbert procured his specimens."

It is interesting to note, as Mathews has pointed out, that typelocality birds have a black crown instead of brown, as in North-West specimens (fitzroyi). The Territory birds, in general, are also more intensely coloured. There is less difference in the respective females.

Oriolus flavocinctus, King. Yellow Oriole.

Neomimeta f. flavocinctus.

One \mathfrak{F} , \mathfrak{I} \mathfrak{P} . Gilbert likewise procured a pair of these fine birds, which possess more black markings on the back than east and west coast specimens, but agree with the latter in their lighter (olive-yellow) under surface. East coast birds have a richer yellow (yellowish-citrine) above and below, and have more yellow in the light-coloured edgings of the wing feathers and tail tips, and are slightly larger. Two races can therefore be easily discerned visually—the type (flavocinctus), from North and North-West, and the more handsome kingi, Mathews, on the east.

Dimensions in mm.:—

Cracticus quoyi, Quoy. Quoy Butcher-Bird.

Melloria quoyi spaldingi.

One 3, wing 195; I \circ , wing 180 mm. Similar to east coast birds, which are a brighter black. Wing of eastern specimens 170–175 mm. Masters's *spaldingi* may stand, but Gilbert first procured this black Butcher-Bird—a mangrove, mud-loving, crabhunter.

Cracticus (nigrogularis) picatus, Gould. Pied Butcher-Bird.

Two \mathfrak{P} . Similar to North-West examples, also to those from Macarthur River, but the black portions of the plumage are not so intense, nor the white parts so pure; tail and primaries are also browner.

Length 294-305, wing 150-155, culmen 30-35, tarsus 30-32 mm.

Cracticus argenteus, Gould. Silvery-backed Butcher-Bird. Bulestes torquatus argenteus.

Three 33 (1 immature). Length 265–282, wing 140–147, culmen 38–39, tarsus 28 mm. In the common species (destructor or torquatus) the black on the head dissolves into the dark back, whereas in argenteus a deep black head is clearly defined against a grey (neutral) back. The general under surface is also whiter. It is a nice question if the two are specifically distinct, unless the bird obtained in North Queensland be considered intermediate, and links up with the larger southern form (destructor).

Again, Mathews is answerable in his "1913 List" for stating that the type-locality of this bird is "Port Essington." If students will refer to the original description (P. Z. S., London, 1840, p. 126), they will find that Gould gives "North-West Coast of Australia" as the bird's habitat, and that he obtained the speci-

men from Capt. Gray, of H.M.S. Beagle.